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ABSTRACT

In this study, an examination of the determinants and consequences of occupational knowledge is carried out using data collected from the National Longitudinal Survey of 5,159 young women. The study closely parallels a 1975 study by Parnes and Kohen utilizing information collected from about 5,000 young men. The significance of various background factors as potential determinants of a young woman's occupational knowledge score and the effect of this score on subsequent earnings and occupational status are investigated. In addition to contrasting the causal patterns for black and white women, similarities and differences between the results for young men in the Parnes and Kohen study and the results for young women in this study are discussed. The report notes that the extent of vocational counseling was irrelevant as a determinant of the knowledge of the world of work score. It was found that the relevance of occupational information, as measured by this score, to predict early adult labor market success was not as clear for young women as it has been shown to be for men. It is concluded that a pre-career educational "funneling process" effectively restricts career options of many young women to occupational categories which have traditionally fallen within the stereotypical "women's occupations" categories. (TA)

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A young women's knowledge of the world of work is a function of a wide range of environmental phenomena. In some instances the acquisition of "job related" information may begin in childhood. Information is received through reading and other visual materials, through observing and hearing about the work patterns of parents, friends, and peer relationships. In some instances, reflecting various forms of familial and early school deprivation, meaningful knowledge about potential jobs and occupations may be absent.

Because boys are conditioned from early childhood to be aware of their future roles as heads of households and wage earners, they are motivated at an early age to begin to explore vocational options. A girl is presented with a different set of options, including the option of remaining in the home to care for her children. Thus, a girl during her childhood and adolescence will experience conflicting pressures regarding familial versus vocational alternatives. Her reaction to these conflicts in terms of career choice will depend on the strength of various environmental influences in her life.

A test which requires a young women to identify the skill requirements of certain jobs may be one way of measuring her awareness of the world of work. Such an awareness is assumed to be an important factor in her ability to find a job consistent with her educational and skill level.

In this study, an examination of the determinants and consequences of occupational knowledge is carried out using data collected from the National Longitudinal Survey of 5,159 young women.[1] These women, who

were 14 to 24 years of age when first interviewed in early 1968, have been personally reinterviewed each year between 1968 and 1973.

The study closely parallels a 1975 study by Parnes and Kohen which also used data from the National Longitudinal Surveys [6]. Utilizing information collected from about 5,000 young men, they examined the relationships between several background factors and knowledge of the skills, educational requirements, and earnings levels of a selected number of occupations typically held by males.[2] They then examined the extent to which the level of occupational knowledge enhanced the young man's subsequent earnings and degree of occupational success.

Paralleling their male counterparts, the young women were given a series of questions which asked them to identify the major job responsibilities of ten occupations traditionally held by women--assembler, key punch operator, bank teller, department store buyer, dietician, statistical clerk, nurse's aid, social worker, medical illustrator, and quality control girl in a bakery. The number of correct answers they gave (ranging from 0 to 10) was used to represent their overall "knowledge of the world of work." Obviously, this cumulative score is somewhat limited. To the extent that the occupations depicted are not completely representative of the occupations usually occupied by women, the score will only be partially valid. Also, there are many other types of knowledge which facilitate the job search process for women and which may not be captured by this one-dimensional scale. Among these other types are an awareness of the skill requirements of jobs, their earnings potential,

and prospects for local or national employment in a particular occupation. Nonetheless, assuming that the occupations included in the scale are representative, it is likely that scores on this scale should correlate highly with a general awareness of occupations that have been typically chosen by women.

We will investigate the significance of various background factors as potential determinants of a young woman's occupational knowledge score. In addition, this study will examine the effect that this occupational knowledge base has on subsequent earnings and occupational status. In addition to contrasting the causal patterns for black and white women, similarities and differences between the results for young men in the Parnes and Kohen study and the results for young women will be discussed.

The Determinants of Occupational Information

At the time of the 1969 interviews, the sample of approximately 5,000 young adult women was a highly heterogeneous group, including substantial numbers of whites and blacks, both enrolled and not enrolled in school.[3] Each of these four race-enrollment categories was sufficiently large to warrant separate examination paralleling the analytical procedure followed by Parnes and Kohen with the young men.

Table 1 shows the means, medians, and standard deviations of the young women's scores on the knowledge of the world of work test. On average, whites scored significantly better than blacks, with the variance in the distribution of responses about the same for both racial groups.

(Insert Table 1)

In order to explain these differentials in scores between white and black young women as well as to explain how they develop their knowledge of career choices, a multiple regression format with the knowledge of work score as the dependent variable was developed.[4] Most of the explanatory variables used in the model are either standard human capital measures or variables used to represent familial and other background environmental factors.

Educational attainment, as of the 1969 survey, was included as the most basic of the human capital measures with the obvious expectation that the number of years of school a girl has completed will be positively associated with her knowledge of the world of work. This assumption is predicated on the idea that various components of the formal educational process contribute to a young woman's awareness of work opportunities and requirements.

The IQ score of the respondent is included as an obvious complement to the education variable.[5] In this context, we view the IQ score not predominantly as a measure of innate intelligence, but rather as a proxy for the knowledge the young woman has acquired from her early years of schooling as well as from her home environment. Obviously, in addition, a youth with more innate intelligence has a greater capacity for acquiring knowledge of all types, including knowledge relating to occupational choice. Thus, the net effect of the variable is expected to reflect the relevance of acquired substantive knowledge independent of the formal educational process.

Table 1 Means, Medians, and Standard Deviations of Occupational Information Test Scores, by Color[a]

Statistics	WHITES	BLACKS
Arithmetic mean	7.7	5.6
Median	7.3	5.1
Standard deviation	2.0	2.5

a Based on unweighted sample cases. Possible scores ranged from 0 to 10.

A positive association is expected between the extent of a respondent's work experience during the preceding several years and her degree of occupational awareness. For out-of-school women, separate variables for the extent of work experience and duration out of school are utilized. Whereas for the young men, one could hypothesize that years out of school would coincide with years of work experience, for the women, this assumption would not be valid because many women spend a large part of their post-school years out of the labor force. The work experience variable as constructed measures both duration and recency of job experience.[6] The "years since left school" variable may be thought of as a general maturational variable suggesting the extent to which a young woman picks up knowledge of the world of work in the post-school years independent of specific work experience. This maturational component is undoubtedly a function of her interaction with friends and family as well as the level of work related knowledge which these acquaintances impart. One can hypothesize that individuals living in more enriched environments acquire more relevant labor force knowledge in their day-to-day lives, independent of knowledge acquired on the job, than do less advantaged individuals.

Aside from the influence of schooling, there are a myriad of factors from a young woman's home environment which can affect and alter her awareness of the world at large. Many of these factors can be subsumed under the rubric of "socioeconomic background," a socioeconomic index (SES) which in this study is a combined measure incorporating father's education, mother's education, occupation of father, education of oldest older sibling and a

measure of the availability of reading material in the home when the respondent was age 14.[7] It is anticipated that this socioeconomic variable will have a positive effect on the extent of occupational knowledge.

In general, larger communities with larger labor markets tend to have a greater variety of job opportunities. Thus, young women from larger communities should be exposed to a broader range of occupational opportunities available. This should be demonstrated in the model by coefficients of increasing size as one moves from the dummy variable for rural nonfarm residents (at age 14) to that for residents of larger cities. The reference group used was composed of those living on rural farms.

It is also hypothesized that the greater the availability of guidance counselors in a school system, the greater the likelihood that a youth will receive specific occupational guidance prior to entering the labor market. Such specific occupational guidance in turn should increase a young woman's knowledge of career choices.

A variable not included in the Parnes and Kohen work but included in this study indicates whether or not the respondent's mother was working when the respondent was age 14. It is expected that a young woman's knowledge of work choices should be positively associated with her mother's having been working during her formative years. This influence should be particularly apparent for the young woman who is still a student and who therefore, has presumably had less exposure to the labor market.

Table 2 presents our regression results estimating the impact of the various factors on enhancing a young woman's knowledge of the world of

work. Certain basic similarities are evident between the results of our model and that of Parnes and Kohen. Both educational attainment and IQ are highly significant predictors of occupational knowledge for all categories of young men and women. Also, the socioeconomic background coefficient attains significance for all groups, except white girls enrolled in school where the coefficient fails to attain significance.[8]

(Insert Table 2)

Work experience appears to be of considerable predictive value for both black and white girls not enrolled in school. This variable is not, however, comparable to the measure of work experience used by Parnes and Kohen, as our variable represents actual labor force attachment during the recent past.[9] As expected the extent and recency of labor force attachment is associated with a greater level of occupational knowledge. However, work experience demonstrates no particular value for those girls enrolled in school, suggesting that student jobs are probably of only marginal value as repositories of meaningful career-related information.

Of considerable significance are the coefficients for the "years since left school" variable which indicate a major variation in results between black and white young women not enrolled in school in 1969.

There is clearly a strong maturational factor affecting a young white woman's level of occupational knowledge independent of her actual work experience. That this does not appear for young black women is consistent with the idea that the somewhat more limited environment of the average black woman is less conducive to expanding her vocational

Table 2 Regression Results: Occupational Information Test Score

Explanatory variable	Enrolled in school		Not enrolled in school	
	WHITES	BLACKS	WHITES	BLACKS
Years of school completed	.21***	.37***	.19***	.40***
	(7.16)	(4.05)	(6.76)	(4.76)
Years since leaving school	-	-	.07***	- .02
			(4.27)	(- 0.41)
IQ score	.03***	.05***	.03***	.05***
	(8.65)	(5.70)	(10.90)	(6.29)
Index of socioeconomic status[a]	.03	.21***	.09***	.15***
	(1.13)	(2.71)	(3.85)	(2.59)
Work experience[b]	.04*	- .03	.07***	.23***
	(1.39)	(-0.31)	(2.68)	(3.15)
Type of residence at age 14				
Rural farm	d	d	d	d
Rural non-farm	- .13	- .24	.08	- .11
	(-0.60)	(-0.47)	(0.53)	(- 0.27)
Small city (under 25,000)	.05	.19	.10	.11
	(0.27)	(0.38)	(0.80)	(0.33)
Medium-sized city (25,000-100,000)	.40***	- .50*	.03	.17
	(2.78)	(-1.40)	(0.27)	(0.62)
Large city (over 100,000)	- .16	.64*	.19*	.51*
	(-0.88)	(1.41)	(1.53)	(1.54)
Counsellors per 100 students in high school	.001	.01	- .001	- .002
	(0.53)	(0.79)	(- 0.37)	(- 0.39)
Mother working at age 14[c]	.03	.20	.15**	- .13
	(0.29)	(0.77)	(1.91)	(- 0.68)
Constant	1.34***	-5.03***	.94***	- 4.52***
	(2.77)	(-4.22)	(2.40)	(- 4.25)
N	970	225	1,485	372
Adjusted R^2	.19	.37	.21	.31
F	23.20	14.08	37.68	16.16

Source: National Longitudinal Surveys data are for females 15 to 25 years of age interviewed in 1969. Regressions are based on weighted observations.

(Table continued on next page.)

Table 2 -- Continued

a See discussion of SES index in the text, pp. 6-7.
b See footnote 6.
c Dummy variable: 1 if mother was in the labor force when respondent was age 14; 0 otherwise.
d Omitted category.
* Significant at .10 level.
** Significant at .05 level.
*** Significant at .01 level.

horizons. Even though the young men's model treated years out of school as a proxy for work experience, the same variations between blacks and whites are noted. This strongly suggests that because of the relatively discontinuous work history of young black men out of school,[10] the duration variable is not a useful work proxy for that group. Indeed, as noted earlier, the actual work experience variable for young black women out of school was a highly effective predictor of level of occupational awareness.

In addition to the consequences of SES, IQ, and general maturation, our model also tests the significance of the size of the respondent's residence at age 14. In the analysis of young men, residence in a large city or its suburbs appeared to augment a young man's occupational knowledge significantly, regardless of enrollment status or race. For the young women, highly significant results were only obtained in the case of white women currently enrolled in school and living in a city of 25,000 to 100,000 population. As can be seen in Table 2, among young black and white students, the large city variable is only of marginal significance. The apparent randomness of these results is an artifact of the restriction of the sample discussed above (see footnote 5). For these groups, expanding the sample by including the sample cases coded "not available" on IQ led to the size-of-place coefficients showing significant increases (except in the case of white students) as one moves from rural nonfarm to large city residence. For all groups except the white student group, the revised coefficients for "large city" (including all those recorded as NA on IQ) attained high degrees of statistical significance.

Consistent with the results for young men, the prevalence of an above average number of counselors in the respondent's high school proved to be irrelevant. This is a somewhat discouraging note perhaps partly reflecting the quality of current high school vocational guidance and partly suggesting that a more sensitive measure of in-school counseling is needed.

Whether or not a young woman's mother was working when the young woman was 14, somewhat surprisingly had marginal significance for only one of our categories, young white women not enrolled in school. Thus the presence of a role model within the family structure appeared to have little effect in predicting a young woman's knowledge-of-work score and therefore, by implication, her understanding of work career choices.

A revised model, limiting the observed universe to those young women who were either high school students or who had terminated their education at the high school level,[11] is presented in Table 3.[12] This model also includes separate variables indicating whether or not the young woman was enrolled in a vocational or college preparatory curriculum. Obviously, various aspects of the classroom experience contribute to a young woman's awareness of the intricacies of the world of work. High school students following different curricula, which include more or less specific occupational content, might be expected to be differentially informed about employment opportunities. The two-category curriculum variables were not included in Table 2 because of the effect that the variable would have on the explanatory

power of the educational attainment (years of school) variable. Since in our revised model we have restricted the number of years of schooling that a young woman has had, the inclusion of such a curriculum variable is more appropriate.[13]

(Insert Table 3)

As may be noted in Table 3, the revised model for high school students provides results for the most part very similar to the overall model.[14] The work experience variable for white young women not enrolled in school has, however, dropped slightly in significance, although the coefficient has remained nearly the same. Whether or not a respondent's mother was working when the respondent was 14 is marginally more significant than under the unrestricted model for enrolled groups. This result supports our hypothesis that the influence of a respondent's mother having worked would be most apparent for those women still in school who have less exposure to the job market and those women who are out of school but, by virtue of limited education, have restricted job choice.

The type of curriculum followed by the respondents while in high school was also found to be a significant predictor of occupational knowledge, particularly for those not enrolled in school. The more intensive vocational programming of the average vocational curriculum and the more diversified college preparatory programs contribute more to a young woman's career perspectives than the average high school general curriculum program. Also, to the extent that the vocational and college preparatory programs "select out" those with

Table 3 Regression Results: Occupational Information Test Score Limited to those with no more than a High School Education

Explanatory variable	Enrolled in school		Not enrolled in school	
	WHITES	BLACKS	WHITES	BLACKS
Years of school completed	.42***	.57**	.50***	.48***
	(3.30)	(1.90)	(8.48)	(3.66)
Years since leaving school	-	-	.07***	-.004
			(4.26)	(-0.08)
IQ score	.04***	.06***	.036***	.05***
	(7.81)	(4.92)	(9.90)	(5.94)
Index of socioeconomic status	.04	.23**	.08***	.13**
	(0.90)	(1.98)	(3.11)	(1.96)
Work experience	- .02	- .04	.06**	.26***
	(-0.51	(-0.35)	(1.81)	(3.32)
Type of residence at age 14				
Rural farm	c	c	c	c
Rural non-farm	.03	- .95*	.17	- .63*
	(0.09)	(-1.47)	(1.02)	(-1.45)
Small city (under 25,000)	.32*	.23	.23**	.29
	(1.31)	(0.33)	(1.65)	(0.80)
Medium-sized city (25,000-100,000)	.42**	- .25	.14	.20
	(1.95)	(-0.55)	(1.01)	(0.69)
Large city (over 100,000)	.05	- .05	.26**	.65**
	(0.22)	(-0.08)	(1.79)	(1.86)
Counsellors per 100 students in high school	.0004	.01	-.002	-.007
	(0.17)	(1.10)	(-1.05)	(-1.13)
Mother working at age 14	.20*	.52*	.17**	- .25
	(1.43)	(1.48)	(1.88)	(-1.17)
Type of high school curriculum				
General curriculum	c	c	c	c
Vocational curriculum[a]	.35**	.72**	.35***	.59**
	(1.94)	(1.82)	(3.59)	(2.28)
College preparatory curriculum[b]	.12	.60*	.26**	.82***
	(0.71)	(1.38)	(2.01)	(2.42)
Constant	-2.40*	-8.29***	-3.17***	-5.73***
	(-1.63)	(-2.49)	(-4.33)	(-3.52)
N	541	140	1153	317
Adjusted R^2	.16	.33	.24	.33
F	9.65	6.69	28.70	12.80

(Table continued on next page.)

Table 3 -- Continued

Source: See Table 2. For those enrolled in school, universe restricted to those who had completed the eleventh grade or less by the time of the interview in 1969. For those young women not enrolled in school, universe restricted to those having completed the twelfth grade or less.

Variable construction: same as in Table 2 except

a Dummy variable: 1 if enrolled in or completed vocational or commercial curriculum; 0 otherwise.
b Dummy variable: 1 if enrolled in or completed college preparatory curriculum; 0 otherwise.
c Omitted category.
* Significant at the .10 level.
** Significant at the .05 level.
*** Significant at the .01 level.

greater aptitude and knowledge, the vocational and college preparatory curriculums variable may be measuring this phenomenon.

These results contrast with those found by Grasso, who extended the Parnes and Kohen model to include variables for specialization in vocational, commercial and college preparatory curricula.[15] His universe is restricted to males either enrolled in grades 10, 11 or 12, or those not enrolled who had completed just 12 years of school. He concludes that, after controlling for IQ and socioeconomic factors, there was no consistent association between the amount of occupational information possessed by a young man and his choice of high school curriculum.[16]

In part the different results obtained for the young men may stem from differences in the comprehensiveness of the test of occupational information and the particular occupations selected for the test.[17] Also one might hypothesize that girls obtain more work-specific information in a commercial track than do boys in the comparable vocational education track.

Occupational Information as a Determinant of Early Career Success

The above results are of some interest in their own right since they suggest patterns of continuity between values evolving from family, school and other background environmental factors and subsequent occupational identifications. However, of greater importance is how these factors, through the medium of imparting occupational information, are translated later into substantive socioeconomic benefits for the young woman. We seek an answer to the question

of what value is the acquired occupational information for ultimately augmenting the earnings or the occupational status of the young woman. Table 4 examines the direct effect of occupational knowledge on the subsequent labor market experience for young women. Our model attempts as much as possible to replicate the model employed by Parnes and Kohen, although one variable has been added. The addition is a continuous variable, indicating the number of years since a young woman left school, which is used to net out maturational effect independent of the woman's actual work experience.

(Insert Table 4)

It is hypothesized that the occupational information acquired as of 1969, should have a positive effect on vocational behavior at a later date, in this case as of the interview date in 1971.[18] Included as explanatory variables, in addition to the occupational information test score, are a wide range of human capital variables.[19] These variables serve dual functions. First, they enable us to measure the effect of occupational knowledge on subsequent labor market experience independent of the background factors. Second, we can use the comparison of our results with those of Parnes and Kohen to draw some conclusions as to whether an individual's sex makes any difference in explaining the effect of the knowledge of work on later earnings and occupational status.

Even a cursory comparison of our results with those of Parnes and Kohen indicates several significant similarities as well as differences. Whereas a young man's level of occupational knowledge

Table 4 Regression Results: Hourly Earnings and Duncan Socioeconomic Index of Occupational Assignment

Explanatory variable	Hourly earnings		Duncan	
	WHITES	BLACKS	WHITES	BLACKS
Knowledge of world of work score	2.67	2.76*	.03	.15
	(1.09)	(1.31)	(0.08)	(0.27)
Years of school completed	24.48***	24.05***	3.87***	5.49***
	(10.67)	(7.28)	(9.83)	(6.16)
Years since leaving school	7.43***	1.97	- .33	- .70
	(5.53)	(1.09)	(- 1.42)	(- 1.42)
IQ score	.40*	.82***	.23***	.28***
	(1.32)	(2.44)	(4.46)	(3.07)
Index of socioeconomic status[a]	3.07*	.21	.83***	.93
	(1.55)	(0.08)	(2.46)	(1.26)
Quality of high school[b]	.61	2.18	- .49	.43
	(0.36)	(1.18)	(- 1.69)	(0.86)
Work experience[c]	17.50***	9.38**	2.17***	1.67*
	(5.76)	(2.28)	(4.18)	(1.50)
Health condition[d]	-10.67	-26.28*	- 5.80**	-13.94***
	(- 0.65)	(- 1.44)	(- 2.08)	(- 2.83)
Region of residence[e]	-13.45**	-54.47***	4.48***	- 7.47***
	(- 1.76)	(- 5.84)	(3.42)	(- 2.96)
Place of residence[f]	25.23***	11.11	2.26**	9.26***
	(3.43)	(0.95)	(1.79)	(2.94)
Constant	-265.61***	-191.75***	-44.11***	-74.71***
	(- 7.11)	(- 4.19)	(- 6.90)	(- 6.04)
N	847	197	847	197
Adjusted R^2	.26	.45	.28	.44
F	30.23	16.88	33.74	16.64

Source: National Longitudinal Surveys: females 17-27 years of age, who were not enrolled in school and were employed at the time of the interview in 1970. Wage rate and Duncan Index relate to job held in 1970. Regressions based on weighted observations.

a See Table 2.

b An index based on per-pupil availability of library facilities, pupils per full-time teacher, full-time equivalent counsellors per 100 pupils, and annual salary of a beginning teacher.

(Table continued on next page.)

Table 4 -- Continued

c See footnote 21.
d Dummy variable: 1 if health condition affects work; 0 otherwise.
e Dummy variable: 1 if resides in the South; 0 otherwise.
f Dummy variable: 1 if resides in SMSA; 0 otherwise.
* Significant at the .10 level.
** Significant at the .05 level.
*** Significant at the .01 level.

was a significant predictor of earnings and occupational status, the results for young women are more qualified. Only for black women is the knowledge of work score even marginally significant in predicting hourly earnings.

An awareness of the world of work appears to have no effect on the occupational status of young women. This lack of significance in the Duncan Index models may well be associated with the patterns of occupational discrimination which women encounter in the labor market.[20] While occupational knowledge may pay off in a better matching of individual skills and employer needs for young men, institutional rigidities may prevent a similar effective matching for women. Also the socialization process, which young women experience from childhood, has the effect of channelling women irrespective of their knowledge of job opportunities into a limited set of occupations.

As with the model for young men, educational attainment is strongly correlated with the earnings and occupational status of young women. IQ shows a strong independent effect on occupational status for both black and white young women and also contributes significantly to explaining the hourly earnings of black young women. The number of years since leaving school was a strong predictor of hourly earnings for white women but was not relevant as a predictor of occupational status for black or white women.

Whereas socioeconomic background is of no relevance as a predictor for young men, it is a meaningful antecedent as a determinant of social status for young white women. This suggests that there

may be a greater tendency for these young women to seek jobs through personal contacts, a job search approach closely intertwined with a labor market which traditionally has restricted higher level job opportunities for women.

The quality of high school attended appears to have little effect on hourly earnings or the Duncan score, except for a marginally significant association with the earnings of black young women. Also, consistent with the pattern among young men, hourly earnings correlate highly with the extent of work experience for young women.[21] Particularly for white women, work experience is a highly significant predictor of occupational status, as is true with the young men. Having a detrimental health condition does not seem to have a major effect on earnings levels for the girls, indicating that a young woman in poor health is likely to drop out of the labor force and thus not appear in a model limited to employed individuals.[22]

Young black women were handicapped both with respect to earnings and the ability to obtain quality employment if they lived in the South, as indicated by the significant negative coefficients for the region of residence variable. However, a young white woman's ability to obtain a higher status job was enhanced by living in the South. This result may represent the opposite side of the same coin and reflect patterns of racial discrimination still existing in the South. Finally, living in a big city was conducive to higher earnings for white women and augmented significantly the occupational status of white women and marginally the status of black women. These results

are even stronger than those for the young men and certainly what one would expect given the wider range of job opportunities available in larger labor market areas.

In general, the results for all respondents (Table 4) are consistent with the results for the more restricted sample of young women who have only a high school education. The results for this restricted sample are given in Table 5. The consistency of the results suggests that basically the same factors are operative for young women regardless of educational attainment.

(Insert Table 5)

However, there are several differences which are of interest. Educational attainment becomes only marginally significant as a predictor of hourly earnings. With this restricted universe, the quality of high school attended does appear to have some impact on the earnings of young black women. There is no parallel effect for white high school students suggesting the selective importance of higher quality education for enhancing the economic well-being of otherwise deprived young black girls.

Summary and Conclusions

A wide variety of environmental factors is found to be associated with the level of occupational knowledge of young women, regardless of race or school enrollment status. It is, from a public policy view, disheartening to note that the extent of vocational counseling was irrelevant as a determinant of the knowledge of world of work score.

The relevance of occupational information, as measured by the knowledge of world of work score, to predict early adult labor market

Table 5 Regression Results: Hourly Earnings and Duncan Socioeconomic Index of Occupational Assignment for Youth with no more than a High School Education

Explanatory variable	Hourly earnings		Duncan	
	WHITES	BLACKS	WHITES	BLACKS
Knowledge of world of work score	1.16	3.33*	.11	- .07
	(0.49)	(1.50)	(0.23)	(- 0.10)
Years of school completed	12.71**	13.69**	4.17***	4.87**
	(1.90)	(1.81)	(2.96)	(2.21)
Years since leaving school	7.23***	.74	- .29	- .35
	(5.64)	(0.39)	(- 1.07)	(- 0.63)
IQ score	.63**	.93***	.31***	.43***
	(2.05)	(2.57)	(4.78)	(4.13)
Index of socioeconomic status	4.17**	2.00	1.04***	.87
	(1.97)	(0.67)	(2.34)	(1.00)
Quality of high school attended	- .36	3.78**	- .78	.12
	(- 0.21)	(1.88)	(- 2.18)	(0.20)
Work experience	19.29***	8.13**	2.59***	.95
	(6.40)	(1.83)	(4.09)	(0.74)
Health condition	- 6.61	-25.63	- 5.94**	-13.73***
	(- 0.42)	(- 1.40)	(- 1.81)	(- 2.59)
Region of residence	- 9.43	-43.76***	3.67**	-10.32***
	(- 1.21)	(- 4.29)	(2.24)	(- 3.48)
Place of residence	20.91***	4.97	4.00***	10.49***
	(2.88)	(0.40)	(2.61)	(2.92)
Constant	-148.05**	-96.75	-59.06***	-75.78***
	(- 1.80)	(- 1.03)	(- 3.42)	(- 2.79)
N	589	152	589	152
Adjusted R^2	.18	.30	.14	.34
F	13.69	7.36	10.39	8.68

Source: See Table 4. Universe restricted to those having completed the twelfth grade or less.

Variable construction: same as Table 4.

* Significant at the .10 level.
** Significant at the .05 level.
*** Significant at the .01 level.

success was not as clear for young women as it has been shown to be for men. While wages of young women were somewhat enhanced if they had greater occupational knowledge, this did not carry through to our measure of occupational success. This is consistent with the well known fact that labor market supply and demand considerations restrict a young woman's effective occupational spectrum. A young woman entering the labor market encounters many forms of subtle and overt job discrimination. In addition, a myriad of self-selecting criteria, many based on historical patterns of institutionally based sex discrimination as well as early childhood socialization, undoubtedly limit not only the types of jobs women seek but also the range of educational options at both the secondary and university level which they pursue. This pre-career educational "funneling process" effectively restricts the career options of many young women to occupational categories which have traditionally fallen within the stereotypical "women's occupations" categories.

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FOOTNOTES

[1]The original sample was representative of U.S. women 14 to 24 years of age when first interviewed in early 1968. They were subsequently reinterviewed in early 1969, 1970, 1971, 1972 and 1973. Further follow-up by telephone was accomplished in early 1975 and an additional follow-up telephone interview is planned for 1977. In early 1978, a final lengthy interview is planned. The sample includes a disproportionate number of black young women in order to permit statistically meaningful independent analysis of that group. There were about 1,500 black respondents in the total sample. The separate black and white subpopulations, as well as the overall combined group (which included a small number of young women of other races) are weighted so as to represent properly the total U.S. population.

[2]The index of occupational information used by Parnes and Kohen included three components: identification of occupational duties, educational attainment and relative earnings. Subsequent analysis for the young men suggested, however, that the relative earnings component of the occupational knowledge measure added little to the explanatory power of the variable. Thus, the major difference between the occupational measure used in this study and in the Parnes and Kohen study is the component relating to educational awareness. For further evaluation of the young men's test results see [5], pp. 133-44.

[3]Because of sample attrition, the same number of women were not interviewed each year. 5,159 women were interviewed in 1968, 4,930

in 1969 (the year the occupational information items were asked), and 4,714 in 1971 (the year for which the wage and social status information used in the study was elicited). This slight reduction in sample size (about 9 percent) between 1968 and 1971 introduced no known biases into the sample. A very small number of nonwhite nonblacks have been excluded from the analysis. In 1969, about 40 percent of the sample was enrolled in school and 60 percent was not enrolled.

[4]For a tabular analysis of the relationship of the knowledge of world of work score with certain socioeconomic variables see [7], pp. 51-57.

[5]The addition of the IQ variable may be expected to contribute significantly to predicting the amount of occupational information. However, because of the manner in which the IQ information was collected, its introduction into the model reduced significantly the sample size for the various subgroups, particularly for black women. IQ score was collected only for youth who had at least attended high school, thus truncating the educational spectrum for these models. Also IQ scores were not obtained for a disporportionate number of young women who attended school in rural areas, in the South, in private schools, or in primarily black high schools. For a description of the method of constructing this measure of intelligence from the test scores obtained from high schools, see [4], pp. 155-74.

A careful analysis of the possible effects of this socioeconomic truncation and low response rate indicates that for black students and nonstudents and for white nonstudents, the inclusion of the IQ

variable results in a significant decline in the importance of the coefficients associated with place of residence. For blacks, when those without an IQ score are included in the model, young women growing up in larger, more urban communities appear to have a significant advantage in acquiring occupational information.

[6]Because it is impossible to obtain information on total years of work experience, certain adjustments were made in the variable construction. The explanatory strength of the constructed variable was checked by creating a series of dummy variables for each level of work commitment. The reference group was that group which had never worked more than two weeks. We found that, when these dummied variables were used in the model, they indicated consistent results across all groups. Therefore we concluded that our specification of a continual work experience variable was valid.

The work experience variable is coded from 1 to 5 with 5 being greatest degree of recent work attachment and 1 being no history of work attachment. Code 5 means that the girl worked in both of the two years preceding the interview, 4 in just the year preceding the interview, 3 in the second year preceding the interview but not the immediately preceding year, and 2 neither of the two years preceding the interview but at some prior date.

[7]The index has a mean value of 10 and a standard deviation of approximately 3. For a fuller description of the components of the index and of the method of calculating it, see [4], pp. 177-83.

[8]The small SES coefficient for enrolled white girls probably reflects complex interactions between SES, IQ and educational attainment. Indeed, the introduction of IQ and educational attainment into the model reduces the SES coefficient far more for the white enrolled group than for any other group.

[9]See footnote 6.

[10]One indicator of this disruptive pattern of work history on the part of young black males is seen in the continuing trend of significantly higher levels and duration of unemployment among this group as compared to young white males. See for example, [8], Supplementary Tables C and K.

[11]For those young women enrolled in school, we restricted the universe to those who had completed the eleventh grade or less by the time of the interview in 1969. This eliminated any possibility of the inclusion of college freshmen in the sample. For those young women not enrolled in school, we restricted the universe to those having completed the twelfth grade or less.

[12]We also ran this revised model incorporating in the occupational information test score only those seven occupational areas occupied predominately by individuals with only high school level training. Three of the occupations--social worker, medical illustrator and dietician--generally presuppose some college level experience. There was less explanatory power evidenced by our revised model with this restricted score than with the total score.

[13]Those who took the general curriculum track were used as the reference group.

[14]There was some decline in the adjusted R^2 for the in-school groups probably reflecting the narrower range of possible scores for the independent variables, particularly the educational attainment variable now narrowed to the possible maximum of 11 years of school.

[15]See [3], pp. 52-53, 81-82.

[16]For an intercurricular comparison between job corp enrollees and high school students as to the extent of career information, see [2].

[17]For details on the occupational information test score construction and universe restrictors, see [3], pp. 52-53.

[18]The universe, therefore, includes only those who were not enrolled by the time of the 1971 date of interview and who classified themselves as working.

[19]For further information on the theory of human capital investment, see [1], pp. 9-49.

[20]As an additional caveat, it should be noted that the Duncan Index was originally validated for men and thus is probably not overly sensitive to female occupational status and prestige considerations.

[21]The work experience variable is coded from 1 to 5 with 5 being the greatest degree of recent attachment and 1 being no history of work attachment. Code 5 means that the young woman worked all three

of the previous interview years, 1968, 1969, 1970. Code 4 means that she worked only two of the three years preceding the 1971 interview. Code 3 indicates that she worked only one of the years preceding the interview. Code 2 means that she had not been working at the time of any of the previous interviews but had some prior work experience. The reference group was that group having no history of work attachment.

[22]The reason for the large coefficients but lack of significance found with the health variable probably relates to the extreme violation of the normality assumption associated with this dummy variable which has a mean extremely close to zero.

Appendix Table 1 Regression Results: Occupational Information Test Score for Young Men

Explanatory variable	Regression coefficient and t-ratio			
	Enrolled in school		Not enrolled in school	
	WHITES	BLACKS	WHITES	BLACKS
Years of schooling	1.67***	1.12***	1.25***	1.67***
	(22.4)	(4.62)	(9.17)	(5.07)
Years since leaving school	-	-	.56***	.14
			(6.09)	(0.66)
IQ score	.11***	.17***	.15***	.09***
	(10.2)	(7.07)	(9.69)	(2.42)
Index of socioeconomic status[a]	.35***	.61***	.39***	.76***
	(4.19)	(3.40)	(3.22)	(2.71)
Work experience[b]	.70*	2.79***	-	-
	(1.56)	(3.28)		
Veteran status[c]	-	-	.30	1.63
			(0.62)	(1.19)
Type of residence at age 14:				
Rural farm	d	d	d	d
Rural nonfarm	0.97*	2.15*	.59	1.66
	(1.56)	(1.47)	(0.84)	(0.80)
Small city (under 25,000)	.73*	1.87*	1.23**	2.46*
	(1.46)	(1.42)	(2.20)	(1.38)
Medium city (25,000-100,000)	1.10**	2.28**	1.54**	- .17
	(2.00)	(1.72)	(2.30)	(-0.09)
Large city or suburb (over 100,000)	1.62***	4.16***	1.69***	3.56**
	(3.20)	(3.48)	(2.94)	(2.14)
Counselors per 100 students in high school	.93	- .84	- .00	-1.54
	(1.40)	(-0.37)	(-0.41)	(-0.45)
Constant	- .51	-7.27***	.35	-5.01
	(- 0.38)	(-2.52)	(0.18)	(-1.10)
N	1,604	323	902	196
(Adjusted) R^2	.40	.40	.29	.32
F	117.82	24.89	41.83	10.06

(Table continued on next page.)

Appendix Table 1 -- Continued

Source: National Longitudinal Surveys. Data are for males 14 to 24 years of age interviewed in 1966. Regressions based on weighted observations as reported in [6], p. 50.

a See Table 2.
b Dummy variable: 1 if ever worked, 0 otherwise.
c Dummy variable: 1 if veteran, 0 otherwise.
d Omitted category.
* Significant at the .10 level.
** Significant at the .05 level.
*** Significant at the .01 level.

Appendix Table 2 Regression Results: Hourly Earnings and Duncan Socioeconomic Index of Occupational Assignment for Young Men

Explanatory variable	Regression coefficient and t-ratio			
	Hourly earnings (cents per hour)		Duncan index	
	WHITES	BLACKS	WHITES	BLACKS
Occupational information test score	1.4**	2.9***	.3***	.3*
	(2.16)	(3.04)	(2.61)	(1.65)
Years of school completed	16.7***	13.6***	6.9***	7.0***
	(6.86)	(3.12)	(15.61)	(7.70)
IQ score	0.7**	- .3	.2***	- .05
	(2.26)	(-0.55)	(4.30)	(-0.48)
Index of socioeconomic status[a]	2.1	.4	.04	1.0*
	(0.98)	(0.12)	(0.11)	(1.33)
Quality of high school attended[b]	- 1.0	1.9	- .5*	- .4
	(-0.57)	(0.72)	(-1.48)	(-0.81)
Years of work experience	13.6***	5.9***	1.5***	1.0**
	(9.10)	(2.73)	(5.62)	(2.31)
Health condition[c]	-28.1***	-41.8**		
	(-2.46)	(-1.94)	f	f
Region of residence[d]	-28.3***	-62.9***		
	(-3.43)	(-5.14)	f	f
Place of residence[e]	17.0**	20.3	2.4**	3.4
	(2.27)	(1.30)	(1.76)	(1.08)
Constant	-105.8***	- 4.8	-89.7***	-77.6***
	(-2.71)	(- .08)	(-12.98)	(-6.06)
N	843	183	843	183
(Adjusted) R^2	.19	.31	.40	.36
F	23.34	9.98	81.25	15.39

Source: National Longitudinal Surveys: males 18 to 26 years of age who had completed at least eight years of school, were not enrolled in school, and were employed at the time of the interview in 1968. Wage rate and Duncan Index relate to job held in 1968. Regressions based on weighted observations as reported in [6], p. 52.

(Table continued on next page.)

Appendix Table 2 -- Continued

a See Table 2.
b An index based on per-pupil availability of library facilities, pupils per full-time teacher, full-time equivalent counselors per 100 pupils, and annual salary of a beginning teacher.
c Dummy variable: 1 if health condition affects work; 0 otherwise.
d Dummy variable: 1 if resides in South; 0 otherwise.
e Dummy variable: 1 if resides in SMSA; 0 otherwise.
f Variable not included in this regression.
* Significant at the .10 level.
** Significant at the .05 level.
*** Significant at the .01 level.